DOCUMENT RESUME

ED 065 512 TM 001 432

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TITLE Manual--Territorial Decentration Test (Revised Edition).
PUB DATE Oct 71
NOTE 22p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Behavioral Objectives; *Children; *Criterion Referenced Tests; Manuals; Perceptual Motor Coordination; Physical Geography; *Scoring; Space Orientation; *Test Construction; *Testing; Test Interpretation; Verbal Tests
IDENTIFIERS Piaget (Jean); *Territorial Decentration Test

ABSTRACT

A test for assessing the child's ability to identify territories and their relationship to each other--the Territorial Decentration Test--is discussed. In addition to a description of the test, the administration and scoring of the test and the assignment of score ranges and criterion levels (Territorial Stages) are described. A directions Form and Response and Score Form are provided (see TM 001 433). (DB)

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MANUAL

TERRITORIAL DECENTRATION TEST

(Revised Edition)

October, 1971

by

Joseph P. Stoltman

TM 001 432

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MANUAL

TERRITORIAL DECENTRATION TEST*

I. Introduction: Piaget's Theory and the Concept of Territory

One of the most complete, systematic, developmental theories of cognitive structure in the literature to date is that proposed by psychologist Jean Piaget. Educators and psychologists (Hunt, 1961; Flavell, 1963; Almy, 1966; Furth, 1970) report that Piaget's theory, increasingly supported by empirical evidence, enables the assessment of children's mental development in general and, in particular, the comprehension and use of abstract concepts. Especially noteworthy is Piaget's account of a developmental, stage-by-stage progression in children's thinking. Included in the theory, and accepted by most psychologists, is the general premise that the transition from a preoperational to a logical mode of thought is one of the important phases in children's development. In Piaget's theory, territorial decentration and territorial inclusion represent such an operational change.

Many researchers have used test materials similar to Piaget's to investigate Piagetian concepts. However, few have constructed standardized procedures. Piaget's study of spatial stages and Jahoda's study of geographical stages, for example, varied with respect to materials, questions, and instructions. The present test was developed to remedy the situation by providing a normative,

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*Formerly entitled Territory Conception Test (January, 1971)

brief and practical assessment of territorial decentration. Prior measures of spatial and geographical stages (Piaget, 1928; 1951; Jahoda, 1963) were evaluated and the tasks and items included in the Territorial Decentration Test are those which proved to be interesting to children, easy to administer, readily scored, and judged statistically sound.

II. Description of the Territorial Decentration Test

The Territorial Decentration Test consists of four subtests: 1) Verbal Territorial Identification (Subtest A) in which the child verbally identifies territories by their political titles (e.g., home town, home county, home state, home nation); 2) Verbal Territorial Relationship (Subtest B) in which the child verbally expresses the inclusion of smaller territories within larger territories; 3) Territorial Inclusion Using Written Symbols (Subtest C) in which the child draws a circle representing a specific territory in relation to an existing circle representing a different territory; and 4) Territorial Inclusion Using Props (Subtest D) in which the child manipulates from two to five props representing territories in order to place them in correct relationship.

The child's level of territorial decentration is determined by behaviors elicited and the explanation of territorial inclusion principles incorporated. Territorial decentration behavior refers to the identification of territories and their relationship to each other. Comprehension is assessed by the child's explanation of a particular territorial relationship.

III. Test Administration and Scoring

The test is administered individually in accordance with the specific instructions provided on the Directions Form. Testing time is approximately twenty minutes per child. A recording form is provided for responses and scores and follows a format similar to the subtests.

There are three columns on the Directions Form. The first column contains the item number and the appropriate cell number in the table of specifications. The next column, Directions, describes the item and necessary materials. The third column, Verbal Instructions, provides the specific wording for the item. The only deviations from the Verbal Instructions are discussed below in Questions and Explanations.

The Response and Score Form has four columns for each subtest. Column one contains the item number. The second column contains plausible responses and an "other" category for recording deviant responses. Column three is a behavior score and column four is an explanation score.

Subtest A requires three sets of maps. Item 4 (Subtest A) necessitates maps of the child's home county and three additional county maps as distracters. The maps must be at the same scale, but offer enough variance that a child familiar with the home county outline will recognize the shape of the map. Item 7 (Subtest A) requires four state maps, the child's home state and three other distracters. Item 10 (Subtest A) utilizes maps of national units in a manner similar to counties and states. Additional requirements

for the maps are: 1) they must be simple outline maps with no information other than the shape of the territory; 2) the distracters must be legitimate rather than hypothetical territories; and 3) the same distracters must be used consistently when germane to the setting.

Subtest C requires a response booklet of nine pages 4 1/4 by 5 1/2 inches. In the center of each page a circle one-inch in diameter must be printed. Each behavioral response is recorded by the child on the response booklet. The child's explanation response is recorded verbatim by the examiner.

Subtest D requires the examiner to record the positions which the child assigns the props. In each instance, the larger prop used is shown on the prepared Response and Score Form. The examiner must also record the child's explanation for positioning porps.

Five props are used:

One gold disc, 7/8 inch in diameter (city)
One tan rectangle, 1-1/2 by 2 inches (county)
Two white rectangles, 2-1/2 by 3-1/2 inches (states)
One black rectangle, 8 by 10 inches (nation).

Rapport

Before the test is begun, it is essential for the examiner to establish rapport with the child. This is best accomplished by greeting the child warmly. Following a personable introduction, younger children can be told they are going to play some games. Older children can be told there are some tasks for them to complete, or that they have been selected to participate in a small research project. During the test the examiner should be certain the child

listens to the instructions and pays attention to the material. It is important that the examiner adapt the administration to the child's speed.

Management of Test Materials

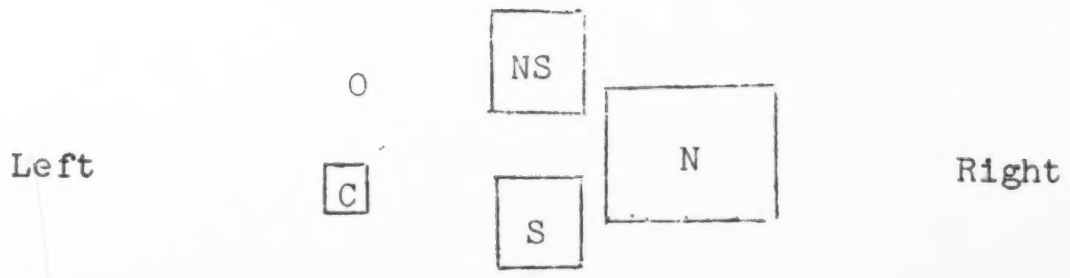
In order to become familiar with the proper procedures, the examiner should administer the test in several practice sessions. Although the manipulations are simple, the examiner must follow the instructions closely to assure uniformity in administration and optimize the comparableness of test results.

In Subtest C, the response booklet should be given to the child one page at a time. As soon as a response circle is marked and an explanation given, the child should turn that page over and be given the next page. After all nine pages are completed they should be stapled together and the child's name written on the booklet.

In Subtest D, only the props the child is manipulating are to be in direct view. To begin each question, the smaller of the two props must always be on the left as the child views them. Geometrical axes for the props must always be as diagrammed when the item is introduced (Fig. 1).

The props in Item 6, Subtest D, are arranged so the child views them from left to right as in Fig. 1. They are to be identified in the following order: city/town, county, home state, neighboring state and nation.

Fig. 1



O - city/town
C - county
S - state
NS - neighboring state
N - nation

Questions and Explanations

The verbal instructions have been formulated to correspond to the vocabulary level of young children. If children ask for clarification or do not respond to a question, the examiner may repeat, but not rephrase the instructions. Two points of caution: 1) Do not identify any of the territories by political title in Subtest A; and 2) it is permissible to substitute the term country for nation, but such substitution should be noted on the response form.

Situations of item frustration for the child must be avoided. In Subtest A, if the child's response to "Do you live in a county?" is "No", the question "What is the name of the county?" and the map recognition are bypassed. Other "No" responses in Subtest A should be treated similarly. If a child's response to "Do you live in a county?" is "Yes", but the child does not know the name of the county, the yes may be an acquiescent response. In those cases, ask the child "Why do you think you live in a county?" The child

may admit uncertainty. On the other hand, the child's awareness of attendance in a county school, or mention of the county prison, etc., may be viewed as knowledge of county residence. Such must be noted on the response form. The state and nation questions should be treated in a similar manner. If a child provides verbal evidence of residence in a county, state, or nation, or any combination of the three, the appropriate map recognition questions should be administered. A child may not immediately have a verbal title for a territory, but may have a recognition knowledge of it which will facilitate a verbal title.

In Subtest B the examiner should not dwell upon a single "Where" or "Where else" question if the child becomes uncomfortable through lack of responses. An "I don't know" response should be accepted. As an option, the "Have you heard of....?" questions in Items 1, 3, 5, and 8 may be inserted. These questions are applicable to children who did not know the political titles requested in Subtest A.

Be certain that the children realize their circles in Subtest C and the props in Subtest D may be placed anywhere on the response page or working area. Inform them, however, that they will be asked to justify the placement of the prop in relation to the other prop(s).

Rewards

Verbal rewards by the examiner are to be restricted to "OK", or "Fine", or "Let's go to the next task". In no instance should the examiner reinforce the child's response with the terms "Right" and

"Wrong".

Pointing

The examiner's gestures should be coordinated with the appropriate statements so the child's attention is directed to the correct objects.

Recording

After the examiner has checked or recorded the behavior response, the child's response to the question "Why" is to be recorded verbatim.

Scoring

The correct responses are determined by the political title of the child's town, county, state, and nation of geographic proximity or residence. Only "Yes" and "Right" responses in Subtest A are awarded credit. The format of the test must be changed to accommodate instances where, for example, county or the other territories are not locally germane (e.g., parish, townships). In Subtest A, the child who responds "Yes" to questions 3, 5, and 8, but does not know the name of the particular territory, should be awarded item credit only if verbal evidence of residence is provided. Attendance in a county school, for example, is indicative of knowledge of the territory. Only then does a "Yes" response in items 3, 5, and 8 justify the map questions. Explanation credit for the maps is awarded if the child recognizes the shape of the territory and relates it to a map or globe observed elsewhere. Subtest A map items receive neither behavioral nor explanation credit when the child indicates the response is a guess.

In Subtest B, the "other" category is not accepted as a correct response unless it is a semantic derivation of one of the satisfactory options listed. Credit for a listed option is granted only once with reference to a particular territory. Credit for Item 7 is awarded if any city/town or county, or state in the nation is identified. No credit is awarded for the optional "Yes" and "No" responses. Their purpose is simply to introduce the child to the titles of political territories in question.

Correct bahavioral responses in Subtest C are those illustrating the logical inclusion of territories. Circles representing smaller territories must be enclosed rather than juxtaposed to circles representing larger territories. Explanation credit is awarded for the correct expression of the territorial inclusion principle involved. The most frequent are: "Town X is in County X, and/or Town X is part of County X".

Correct behavioral responses in Subtest D are those illustrating correct territorial inclusion. Explanation credit is awarded for an expression of principle similar to Subtest C. A child who has correctly responded to all items in Subtest C begins with Item 6 in Subtest D. Items one through five receive credit when those props are correctly placed in Item 6. Beginning with Item 6, the props must be arranged as follows to receive credit:

#6 -- city/town must be on county
#7 -- county must be beneath city/town and on state
#8 -- state must be beneath county beneath city/town and on nation
#9 -- neighboring state must be on nation
#10 -- Each smaller territory must be on the appropriate next larger territory and on the nation

An exception to this scoring format is necessary in large urban centers. In some instances the urbanized (city) area may include all or a majority of the county. If children recognize that phenomena and indicate it is not possible to have the disc represent the city and the tan rectangle represent the county, they should be asked how the props might be relabeled. If such relabeling is accompanied by sound explanation regarding the relationships of the territories, credit must be granted. Similarly, when the county is indeed within the city, appropriate adjustments must be made in labeling the smallest props.

One (1) point is granted for each correct behavioral response and a zero (0) for each incorrect response. One (1) point is granted for each correct explanation response and a zero (0) for each incorrect response.

IV. Assigning Territorial Stages

Piaget's (1928, 1951) reports of research failed to provide a quantifiable record of performance. The present test incorporates the descriptive elements of those reports in the assignment of score ranges and criterion levels for the subtests of the Territory Decentration Test.

Territorial Stage I

A Subtest A behavioral (B) score range between zero and three (0-3) was established as the Stage I inclusion level. That range includes children who do not have a verbal title at their disposal for any political territory in question. Piaget's reports do not specify that a zero score violates any basic premise for the stage.

The belief is that all children older than five or six years of age recognize the title of their city/town even if they are unable to recall the title.

An explanation (E) score of zero or one (0-1) on Subtest A is established for Stage I. Young children may recognize maps but not recall the verbal title of the mapped territory. Such questions provide a recognition assessment of territories.

A behavioral (B) score range between zero and two (0-2) on Subtest B is indicative of minimum verbal territorial inclusion. Children's scores falling within that criterion range are assigned to Stage One.

Subtests C and D ranges for Stage I inclusion are set between zero and two (0-2) for the behavioral (B) responses. A subtest score within that range includes very elementary notions of the relationship of two territories.

The explanation (E) ranges for Subtests C and D are established between zero and nine (0-9) and zero and ten (0-10) respectively. The verbal explanation that a smaller territory is within a larger territory is obtained from an early age. Such a response, however, is not complimented by a correct placement of props in their respective territorial arrangement. As a result, a greater explanation score may be obtained for some children (Table 1).

TABLE 1

Territorial Stage I: Criterion Ranges

Subtest	B	E
A	0-3	0-1
B	0-2	
C	0-2	0-9
D	0-2	0-10

Territorial Stage II

Stage II children command varying degrees of verbal information and, in some instances, compliment prop placement with territorial inclusion principles. However, they do not synthesize their notions and knowledge of territories into any coherent system. Instead, their responses lack a systematic approach to considering the relationships of territories to one another. That lack of consistency is incorporated into the criterion ranges for stage two (Table 2).

TABLE 2

Territorial Stage II: Criterion Ranges

Subtest	B	E
A	4-6	1
B	3-4	
C	3-6	≥B*
D	3-6	≥B*

*Correct explanation (E) items must compliment behavior (B) items on either C or D

Several additional considerations enter into the assignment of ranges for this stage. Those special considerations are intended to accommodate the variation in territorial relationships which Piaget reportedly observed. First, in Subtests C and D, the explanation (E) score must be equal to or greater than the behavioral (B) score. Also, the correct explanation (E) items on Subtest C or D must be complimented by the corresponding, correct behavioral (B) items. Such behavior and explanation score requirements on Subtests C and D accommodate the general variation of response patterns which Piaget attributed to the beginning of territorial decentration.

Second, if criterion ranges and behavioral (B) and explanation (E) item complimentarity are attained on both Subtests C and D, and the criterion range attained on either Subtest A or B, placement in stage two is justified even though the fourth subtest score may not fit the criterion range. The latter exception permits the inclusion of children who perform below the criterion range on one of the non-prop subtests. The inclusion of those children is predicated upon Piaget's observation that matching prop and verbal responses are indicative of greater territorial decentration than verbal responses alone.

Territorial Stage III

Stage III indicates the child has developed the ability to territorially orient the geographical environment through verbalization and prop manipulation. Criterion scores for stage three indicate the synthesizing of territory in a manner comparable to adult standards. To attain the criterion level for stage three inclusion, the explanation (E) items of Subtests C and D must be equal to or greater than and compliment the behavior (B) items (Table 3).

TABLE 3

Territorial Stage III: Criterion Scores

Subtest	B	E
A	7	2
B	5	
C	7	≥B*
D	7	≥B*

*Correct explanation (E) items must compliment behavioral (B) items on Subtest C and D.

Two other considerations are necessary regarding stage three inclusion. First, a child attaining a 100% criterion level on Subtests C and D (behavioral and explanation items) is assigned to stage three regardless of scores on the other subtests. Piaget regarded such complimentary verbal and prop performance as optimum decentration. Second, if the criterion score is attained on Subtest D and two other subtests, assignment to stage three is justified regardless of the score on the fourth subtest. The Subtest D criterion score requires an ability to territorially orient props on a one to one and on a one to four basis. That criterion level requires a more complicated arrangement than the one to one territorial relationships required in Subtest C.

The emphasis upon criterion performance on Subtests C and/or D results from Piaget's observations that territorial decentration is contingent upon the complimentarity of prop placement and verbal reasons exemplifying territorial inclusion principles. The researcher regarded such complimentarity at the seventy percent criterion level on Subtests C and/or D to indicate adequate stability in behavior and explanation responses. The failure to attain the appropriate criterion range or score, or any of the previously stated combinations, requires assignment to the next lower territorial stage.

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TERRITORIAL DECENTRATION TEST

Directions Form

Verbal Territorial Identification (Subtest A)

Item	Directions	Verbal Instructions
1 1.1	Verbal question.	What is the name of the city/town you live in? near? What is the name of the city/town where your family buys food?
2 2.1	Verbal question.	Do you live in a county?
3 2.1	Verbal question. Record response to why.	What is the name of the county? Why do you think you live in a county? (Manual)
4 2.1	Verbal question. Show child county outline maps 4a, 4b, 4c, 4d. Record response to the why.	Which map shows the county you live in? How do you know it is the correct map?
5 3.1	Verbal question.	Do you live in a state?
6 3.1	Verbal question. Record response to why.	What is the name of the state? Why do you think you live in a state? (Manual)
7 3.1	Verbal question. Show child state outline maps 7a, 7b, 7c, 7d. Record response to the why.	Which map shows the state where you live? How do you know it is the correct map?
8 4.1	Verbal question.	Do you live in a nation?
9 4.1	Verbal question. Record response to why.	What is the name of the nation? Why do you think you live in a nation? (Manual)
10 4.1	Verbal question. Show child nation outline maps 10a, 10b, 10c, 10d. Record response to the why.	Which map shows the nation where you live? How do you know it is the correct map?

Verbal Territorial Relationship (Subtest B)

Item	Directions	Verbal Instructions
1 1.2	Verbal question.	Where is (name local city/town)? Have you heard of (local city/town)?
2 1.2	Verbal question.	Where else is (name local city/town)?
3 2.2	Verbal question.	Where is (name local county)? Have you heard of (local county)?
4 2.2	Verbal question.	Where else is (name local county)?
5 3.2	Verbal question.	Where is (name home state)? Have you heard of (home state)?
6 3.2	Verbal question.	Where else is (name home state)?
7 3.2	Verbal question.	Name something that is part of our state.
8 4.2	Verbal question.	Where is (name nation)? Have you heard of (name nation)?
9 4.2	Verbal question.	Name something that is part of (name nation).

Territorial Inclusion Using Written Symbols (Subtest C)

Item	Directions	Verbal Instructions
1 1.3	Show child the circle printed on page 1 of the response booklet. Record response to the why. Be certain child understands circle May be any size and any place on page.	Look at this circle. It shows (name local county). You draw a circle on this page which shows (name local city/town). Why did you put the circle showing (name local city/town) there?
2 1.3	Show child the circle on page 2. Record response to the why.	Look at this circle. It shows (name local state). You draw a circle which correctly shows (name local city/town). Why did you put the circle showing (name local city/town) there?
3 2.3	Show child the circle on page 3. Record response to the why.	Look at this circle. It shows (name local state). You draw a circle which correctly shows (name local county). Why did you put the circle showing (name local county) there?
4 2.3	Show child the circle on page 4. Record response to the why.	Look at this circle. It shows (name local city/town). You draw a circle which correctly shows (name local county). Why did you put the circle showing (name local county) there?
5 3.3	Show child the circle on page 5. Record response to the why.	Look at this circle. It shows (name nation). You draw a circle which correctly shows (name local state). Why did you put the circle showing (name local state) there?
6 3.3	Show child the circle on page 6. Record response to the why.	Look at this circle. It shows (name local city/town). You draw a circle which correctly shows (name local state). Why did you put the circle showing (name local state) there?
7 4.3	Show child the circle on page 7. Record response to the why.	Look at this circle. It shows (name local state). You draw a circle which correctly shows (name nation). Why did you put the circle showing (name nation) there?
8 4.3	Show child the circle on page 8. Record response to the why.	Look at this circle. It shows (name local city/town). You draw a circle which correctly shows (name nation). Why did you put the circle showing (name nation) there?
9 4.3	Show child the circle on page 9. Record response to the why.	Look at this circle. It shows (name local county). You draw a circle which correctly shows (name nation). Why did you put the circle showing (name nation) there?

Territorial Inclusion Using Props (Subtest D)

Item	Directions	Verbal Instructions
1 1.4	Give the child one gold disc and one tan rectangle. Record response to the why.	Here are two pieces of wood. The gold disc (point) shows (name local city/town). The tan piece (point) shows (name local county). You put the pieces so they correctly show (name city/town) and (name county). Why did you put the gold piece there?
2 1.4	Give the child one gold disc and one white rectangle. Record response to the why.	The gold disc (point) shows (name local city/town). The white piece shows (name local state). You put the pieces so they correctly show (name city/town) and (name state). Why did you put the gold piece there?
3 2.4	Give the child one tan and one white rectangle. Record response to the why.	The tan piece shows (name local county). The white piece (point) shows (name local state). You put the pieces so they correctly show (name county) and (name state). Why did you put the tan piece there?
4 2.4	Give the child one tan and one black rectangle. Record response to the why.	The black piece shows (name nation). The tan piece shows (name local county). You put the pieces so they correctly show (name nation) and (name county). Why did you put the tan piece there?
5 3.4	Give the child one white and one black rectangle. Record response to the why.	The black piece shows (name nation). The white piece shows (name local state). You put the pieces so they correctly show (name nation) and (name state). Why did you put the white piece there?
	Give the child one gold disc, one tan, two white, and one black rectangles. Record responses to the whys. The pieces may be identified as often as the child requests.	Here are several pieces of wood. Listen carefully as I tell you what they show The gold disc (point) shows (name local city/town). The tan piece (point) shows (name local county). This white piece (point) shows (name local state). This other white piece (point) shows (name a neighboring state). The black piece (point) shows (name nation). You put the pieces so they correctly show (name city/town, county, state, neighboring state, and nation).
6 1.4	Point to the gold disc.	Why did you put (name city/town) there?
7 2.4	Point to the tan piece.	Why did you put (name county) there?
8 3.4	Point to the white piece showing local state.	Why did you put (name state) there?
9 3.4	Point to the white piece showing neighboring state.	Why did you put (name state) there?
10 4.4	Point to the black piece.	Why do you have (name nation) there? (or) Why do you have (name nation) in that position?

TERRITORIAL DECENTRATION TEST

Response and Score Form
(Behavior-Explanation)

Subtest A

Item	Response	Bv	Ex
1.	Right Wrong Other _____		○
2.	Yes No Other _____		○
3.	Right Wrong Other _____		○
4.	a b c d Why?		
5.	Yes No Other _____		○
6.	Right Wrong Other _____		○
7.	a b c d Why?		
8.	Yes No Other _____		○
9.	Right Wrong Other _____		○
10.	a b c d Why?		
	Score		

Remarks:

Subtest B

Item	Response	Bv	Ex
1.	County State Nation Other _____ — Yes / No		○
2.	County State Nation Other _____		○
3.	State Nation Other _____ — Yes / No		○
4.	State Nation Other _____		○
5.	Nation North America World Other _____ — Yes / No		○
6.	Nation North America World Other _____		○
7.	City/town County Other _____		○
8.	North America World Other _____		○
9.	City/town County State Other _____		○
	Score		○

Remarks:

Subtest C

Item Response	Bv	Ex
1. Why?		
2. Why?		
3. Why?		
4. Why?		
5. Why?		
6. Why?		
7. Why?		
8. Why?		
9. Why?		
Score		

Subtest D

Item Response	Bv	Ex
1. Why?		
2. Why?		
3. Why?		
4. Why?		
5. Why?		
6. Why? (disc)		
7. Why? (county)		
8. Why? (state)		
9. Why? (neighboring state)		
10. Why? (nation)		
Score		

Remarks:

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